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| SERIAL NUMBER | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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| 08/511,491 | 06/06/95 | HARVEY | E624, 274 |

THOMAS J SCOTT JR

26M1/0403

| ART UNIT | PAPER NUMBER |
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| HONG, H | 4 |

2601
DATE MAILED:

04/03/97

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined Responsive to communication filed on _____ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. Notice of References Cited by Examiner, PTO-892.
2. Notice of Draftsman's Patent Drawing Review, PTO-948.
3. Notice of Art Cited by Applicant, PTO-1449.
4. Notice of Informal Patent Application, PTO-152.
5. Information on How to Effect Drawing Changes, PTO-1474..
6. _____

Part II SUMMARY OF ACTION

1. Claims 2 - 4 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. Claims 1 have been cancelled.

3. Claims _____ are allowed.

4. Claims 2 - 4 are rejected.

5. Claims _____ are objected to.

6. Claims _____ are subject to restriction or election requirement.

7. This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. Formal drawings are required in response to this Office action.

9. The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are acceptable; not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been approved by the examiner; disapproved by the examiner (see explanation).

11. The proposed drawing correction, filed _____, has been approved; disapproved (see explanation).

12. Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has been received not been received been filed in parent application, serial no. _____; filed on _____.

13. Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. Other

EXAMINER'S ACTION

Part III DETAILED ACTION

1. This action is in response to the amendment(s) filed 6/6/95 and 11/9/95.

2. This action will not attempt to determine the effective filing date of this application. The action will apply art against the claims using two possible effective filing dates, i.e. serial number 06/317,510, filed November 3, 1981, and serial number 07/096,096, filed September 11, 1987. Applicants can overcome the art rejections by establishing that the art applied does not meet the claimed limitations or that the art does not have an early enough filing date.

The action will make initial double patenting rejections presuming that all of the present claims were fully disclosed in both the '81 and '87 cases.

In any rejections made under 35 U.S.C. 112, first paragraph, applicants will be asked to clarify, where required by the examiner, how the present claims are fully disclosed in both the '81 and '87 cases.

3. Applicants are reminded of their duty to maintain a line of patentable demarcation between related applications. It has been noted by the PTO that many of the pending applications have similar claimed subject matter. In the related 327 applications (the serial numbers are included in a list below), it is estimated that there may be between 10,000 and 20,000 claims. Applicants should insure that substantially duplicate claims do not appear in different cases, and should bring to the PTO's attention instances where similar claims have been treated inconsistently, i.e. rejected in one case but not in another.

4. Applicants are cautioned that their continual use of alternatives in the claims raises questions concerning the exact claim meaning. More importantly, it raises questions whether the disclosure supports every possible embodiment or permutation that can be created by the alternative language.

5. The double patenting rejections in this action are based on the premise that all of the present claims were fully disclosed in U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414.

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Since there was a restriction made in 5,233,654, there will be no double patenting made on that patent or 5,335,277.

6. The PTO's copies of the parent files are in poor form since they have been copied many times by members of the public. The files also are missing some of the papers. The double patenting rejections below presumes that there were no requirements for restriction made in any of the parent files.

7. There are three types of double patenting rejections:

- a) Statutory double patenting rejection under 35 U.S.C. 101,
- b) Nonstatutory obvious type double patenting,
- c) Nonstatutory non-obviousness type double patenting.

In this action, the rejections of the third type that are directed to the claims of the parent patented files will have two different versions. The first rejects the claims because they have not been established to be independent and distinct from the patented claims. The second version includes that premise, and further supports the rejection by establishing that

representative claims from this application have common subject matter with representative ones of the patented claims.

8. Claims 2-41 (all of the claims in this application) are rejected under the judicially created doctrine of non-obviousness non-statutory double patenting over the patented claims in U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414 since the claims, if allowed, would improperly extend the "right to exclude" already granted in those patents.

The subject matter claimed in the instant application is fully disclosed in the patents and is covered by the patents since the patents and the application are claiming common subject matter, as follows: a signal processing apparatus and method including an interactive communications system apparatus and method. Furthermore, there is no apparent reason why applicants were prevented from presenting claims corresponding to those of the instant application during prosecution of the parent applications which matured into patents. *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

A review of the claims in each of the four parent patents (5,109,414; 4,964,825; 4,704,725; 4,694,490) was made. These

patented claims do not appear "independent and distinct" from the claims in this application: The present claims are directed to a method and apparatus for controlling communications including television communications or programming. The claims in patent 5,109,414 were directed to a processing system and method for signal distribution including television. The claims in patent 4,965,825 were directed to a system and process for signal processing including carrier communications. The claims in patent 4,704,725 were directed to a method of communicating data to receiver stations. The claims in patent 4,694,490 were directed to a method for communicating and processing television programs.

Applicants' invention can be envisioned at in three parts. As with most cable TV systems, there is a head end station which generates the video programming. Applicants have included an intermediate station which receives transmissions, from the head end or subscriber stations, and distributes the programming to each subscriber. The subscriber station receives the programming, and can communicate to the intermediate station with requests or instructions. Even if the claims directed to each station were "independent and distinct" from the claims directed

to the other stations, there would be no reason to "restrict" between the three stations since their overall function is so interrelated that the stations have the same search area, i.e the PTO could not establish a burden if required to search for all three stations.

It is believed that CCPA in *Schneller* used the "independent and distinct" standard as the main factor in its determination that the double patenting rejection should be affirmed. The CCPA stated that the fundamental reason supporting the principle of non-statutory double patenting rejections is to prevent unjustified timewise extension of the right to exclude granted by a patent no matter how the extension is brought about. Further the CCPA stated at 158 USPQ 210 (214):

"... To conform to this reason and to prevail here, appellant has the burden of establishing that the invention in his patent is "independent and distinct" from the invention of the appealed claims. The public policy considerations underlying 35 U.S.C. 121 permit separate patents on "independent and distinct" inventions which are initially "claimed in one application." The statute places initial responsibility for this determination on the Commissioner of Patents. Where, as here, no such determination has been made, it is necessary to scrutinize carefully an applicant's voluntary alleged determination of this issue for it can lead to the improper proliferation of patents on the same invention with the inherent result of extending timewise a patentee's right to exclude others from

the invention disclosed in the original application and on which his patent has issued."

The CCPA further stated at page 215 the length of time between an earlier patent and a later filed application should be considered. The filing date of this application was over seven years after the first patent issued (serial number 06/317,510, filed November 3, 1981, patented as 4,694,490 on September 15, 1987) and over four years after the first CIP issued as a patent (serial number 07/096,096, filed September 11, 1987, patented as 4,965,825 on October 23, 1990).

To the extent that one would view *Schneller* and *In re Kaplan*, 789 F.2d 1574, 229 USPQ 678 (Fed. Cir. 1986) to be in conflict, it is clear that *Schneller* is the controlling precedent to the factual situation here. In *Schneller*, the Court specifically distinguished a situation of the same applicant from one where the application and patent had different inventive entities. In *Kaplan*, the inventive entities between the patent and application were different, as was required at the time of the *Kaplan* invention, since *Kaplan's* filing date was before the Patent Law Amendments Act of 1984. In this present case, as with *Schneller*, the inventive entities of the application and patent

are the same. Clearly, Kaplan was required, or entitled, to file separate applications, whereas applicants and Schneller did not have reason to do so. Finally, decisions of a three-judge panel of the Federal Circuit cannot overturn prior precedential decisions of the CCPA. See *UMC Elec. Co. v. United States* 2 USPQ2d 1465.

9. Claims 2-41 (all of the claims in this application) are rejected under the judicially created doctrine of non-obviousness non-statutory double patenting over the patented claims in U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414 since the claims, if allowed, would improperly extend the "right to exclude" already granted in those patents.

This rejection incorporates the rejection above. That double patenting rejection is further supported by *Schneller* because the great majority of the patented claims are "comprising" type claims.¹ While it is recognized that the specific claim limitations in the application may not have been

¹The claims that recite neither "comprising" nor "consisting" are considered to recite open claim language, i.e. equivalent to "comprising". See, for example, claim 1 of Patent 5,109,414.

claimed in the patents, this alone does not establish grounds for overcoming this rejection. The patent claims were directed to parts of applicants' total disclosed system or process.

Therefore the recitation of "comprising" enables those patented claims to "cover" claim features now recited by applicants' present application claims.

Since the head end, intermediate, and subscriber stations are part of the overall system, claims to one part "cover" the other part(s) under the *Schneller* decision (page 215), since the preferred embodiment would include all three parts of the main system, i.e. head, intermediate, and subscriber stations. For example, claims to the subscriber station still cover the intermediate station because the subscriber station would be processing information that had to come from the intermediate station. A second example would be that claims to one aspect or function of the intermediate station would cover the invention of another aspect or function of the intermediate station since both functions could be performed with the other. Applicants' disclosed system includes similar features in the head, intermediate, and subscriber stations. For example, the stations can transmit and receive, and have computer, processor and

controller capabilities. For that reason, the disclosure will permit broadly drafted claims to read on either the head, intermediate, or subscriber station. Patent claims that recite receiving and transmitting can cover both intermediate and subscriber stations. The fact that patent claims and application claims are directed to different elements does not prohibit this rejection if there is common or interrelated subject matter recited. The Court in *Schneller* stated at page 215:

"... They "cover" the preferred form ABCXY, common to the patent and this application, in the same sense. The fact that X and Y are distinct elements, performing, independent functions, so that either can be employed without the other, does not change this fact. Neither does appellant's omission of reference to the lip Y from his patent claims."

Application claim 23 is a representative claim. It is directed to a method of controlling at least one of a plurality of receiver stations each of which includes a receiver, a processor, and a signal detector, said method comprising the steps of:

- a) receiving an instruct signal and one or more control signals which identify at least one specific receiver station in which the instruct signal is addressed;
- b) transferring the instruct signal and one or more control signals to a transmitter of a transmitter station; and

c) transmitting the instruct signal and one or more control signals, wherein the instruct signal causes the receiver station to generate a receiver specific datum for presentation in a specific type of programming presentation.

A review of representative ones of the patented claims will demonstrate that the patented claims cover the invention claimed in this application:

- a) In patent 4,694,490, claim 7 is representative of the claimed method for communicating TV program information to a receiver station. The receiver station receives the video data, displays it, detects the presence of overlay information using an instruct signal, and has computers generate and transmit this overlay info to the display.
- b) In patent 4,704,725, claim 3 is representative, and, as summarized below, recites a method of communicating data comprising:
 - a) multiple receivers, each with a computer,
 - b) transmitting instruct to transmit signals to the computers,
 - c) detecting the signals and coupling them to the selected computers,
 - d) having the computers control their own selected output device.

c) In patent 4,965,825, claim 24 is representative, and, as summarized below, recites generating a computer output having the steps of:

- a) having multiple receivers, each with a computer,
- b) transmitting an instruct to generate signal to the computers,
- c) causing the computers to generate individual user output information.

d) In patent 5,109,414, claim 15 is representative, and, as summarized below, recites a signal processing system (including):

- a) receiver/distribution means,
- b) switch means,
- c) control signal detector means for transferring data to storage means,
- d) storage means for storing and transferring data to processor means,
- e) processor means for controlling.

While claim 15 is an apparatus claim, a method claim and apparatus claim do not in themselves establish groups that are "independent and distinct".

The patented claims are also primarily directed to methods or structure to control element(s) either directly at that station or at another remote station. This control is generally completed with the reception or recognition of an instruct signal. The same common concept exists in application claim 23.

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All of the claims, both patented and pending in this application, when considered together, effectively recite parts of the preferred embodiment, i.e. a head, intermediate, and subscriber station. The patented claims "cover" the claims of the application because the patented limitations do not exclude the limitations of this application.

In the arguments above, the examiner, when discussing several of the patents, stated that the patented claims were broad enough to read on multiple stations. While it is believed this analysis is correct, it is not critical to this rejection. Since the patented claims recite limitations that are interrelated with other similar features claimed in this application, it is the examiner's position that those patented claims "cover" the application claims because all of these claimed features (both in the patent and application) describe what is effectively the preferred embodiment.

The claims in this application, if allowed without a terminal disclaimer, would continue patent protection of the preferred embodiment, i.e. the complete system of the head, intermediate, and subscriber stations, beyond the expiration of applicants' parent patents.

10. It is acknowledged that a multiplicity rejection was mailed on July 27, 1989 in parent file 07/096,096. In this rejection, the examiner had limited the applicants to 25 claims.

Schneller did not equate a multiplicity rejection with a restriction requirement as a permissible exception to being subject to the non-obvious non--statutory double patenting rejection. For that reason, this action will not overturn the legal reasoning in *Schneller* which supports the non-statutory non-obviousness double patenting rejection above.

It is believed, however, that applicants arguments on this multiplicity issue can be better supported if a nexus is established between the claims of this application and those that were canceled in 07/096,096 in response to the multiplicity requirement.

Notwithstanding the comment above, at the time the examiner made the multiplicity rejection, there was a body of case law that had overturned similar rejections. Note *In re Flint* 162 USPQ 228 (CCPA 1969) and *In re Wakefield*, 164 USPQ 636 (CCPA 1970).

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11. A determination of a possible non-statutory double patenting rejection obvious-type in each of the related 327 applications over each other will be deferred until a later time. This action is taken if view of the possibility that many of these applications may be abandoned or merged.

12. Claims 2-41 are rejected under the judicially created doctrine of double patenting over the claims of copending U.S application 08/113,329 and the following related U.S applications (all of the application are series 08) :

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| # | Ser. No. | # | Ser. No. | # | Ser. No. |
|----|----------|----|----------|----|----------|
| 1 | 397371 | 2 | 397582 | 3 | 397636 |
| 4 | 435757 | 5 | 435758 | 6 | 437044 |
| 7 | 437045 | 8 | 437629 | 9 | 437635 |
| 10 | 437791 | 11 | 437819 | 12 | 437864 |
| 13 | 437887 | 14 | 437937 | 15 | 438011 |
| 16 | 438206 | 17 | 438216 | 18 | 438659 |
| 19 | 439668 | 20 | 439670 | 21 | 440657 |
| 22 | 440837 | 23 | 441027 | 24 | 441033 |
| 25 | 441575 | 26 | 441577 | 27 | 441701 |
| 28 | 441749 | 29 | 441821 | 30 | 441880 |
| 31 | 441942 | 32 | 441996 | 33 | 442165 |
| 34 | 442327 | 35 | 442335 | 36 | 442369 |
| 37 | 442383 | 38 | 442505 | 39 | 442507 |
| 40 | 444643 | 41 | 444756 | 42 | 444757 |
| 43 | 444758 | 44 | 444781 | 45 | 444786 |
| 46 | 444787 | 47 | 444788 | 48 | 444887 |
| 49 | 445045 | 50 | 445054 | 51 | 445290 |
| 52 | 445294 | 53 | 445296 | 54 | 445328 |
| 55 | 446123 | 56 | 446124 | 57 | 446429 |
| 58 | 446430 | 59 | 446431 | 60 | 446432 |
| 61 | 446494 | 62 | 446553 | 63 | 446579 |
| 64 | 447380 | 65 | 447414 | 66 | 447415 |
| 67 | 447416 | 68 | 447446 | 69 | 447447 |
| 70 | 447448 | 71 | 447449 | 72 | 447496 |
| 73 | 447502 | 74 | 447529 | 75 | 447611 |
| 76 | 447621 | 77 | 447679 | 78 | 447711 |
| 79 | 447712 | 80 | 447724 | 81 | 447726 |
| 82 | 447826 | 83 | 447908 | 84 | 447938 |
| 85 | 447974 | 86 | 447977 | 87 | 448099 |
| 88 | 448116 | 89 | 448141 | 90 | 448143 |
| 91 | 448175 | 92 | 448251 | 93 | 448309 |

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| # | Ser. No. | # | Ser. No. | # | Ser. No. |
|-----|----------|-----|----------|-----|----------|
| 94 | 448326 | 95 | 448643 | 96 | 448644 |
| 97 | 448662 | 98 | 448667 | 99 | 448794 |
| 100 | 448810 | 101 | 448833 | 102 | 448915 |
| 103 | 448916 | 104 | 448917 | 105 | 448976 |
| 106 | 448977 | 107 | 448978 | 108 | 448979 |
| 109 | 449097 | 110 | 449110 | 111 | 449248 |
| 112 | 449263 | 113 | 449281 | 114 | 449291 |
| 115 | 449302 | 116 | 449351 | 117 | 449369 |
| 118 | 449411 | 119 | 449413 | 120 | 449523 |
| 121 | 449530 | 122 | 449531 | 123 | 449532 |
| 124 | 449652 | 125 | 449697 | 126 | 449702 |
| 127 | 449717 | 128 | 449718 | 129 | 449798 |
| 130 | 449800 | 131 | 449829 | 132 | 449867 |
| 133 | 449901 | 134 | 450680 | 135 | 451203 |
| 136 | 451377 | 137 | 451496 | 138 | 451746 |
| 139 | 452395 | 140 | 458566 | 141 | 458699 |
| 142 | 458760 | 143 | 459216 | 144 | 459217 |
| 145 | 459218 | 146 | 459506 | 147 | 459507 |
| 148 | 459521 | 149 | 459522 | 150 | 459788 |
| 151 | 460043 | 152 | 460081 | 153 | 460085 |
| 154 | 460120 | 155 | 460187 | 156 | 460240 |
| 157 | 460256 | 158 | 460274 | 159 | 460387 |
| 160 | 460394 | 161 | 460401 | 162 | 460556 |
| 163 | 460557 | 164 | 460591 | 165 | 460592 |
| 166 | 460634 | 167 | 460642 | 168 | 460668 |
| 169 | 460677 | 170 | 460711 | 171 | 460713 |
| 172 | 460743 | 173 | 460765 | 174 | 460766 |
| 175 | 460770 | 176 | 460793 | 177 | 460817 |
| 178 | 466887 | 179 | 466888 | 180 | 466890 |
| 181 | 466894 | 182 | 467045 | 183 | 467904 |
| 184 | 468044 | 185 | 468323 | 186 | 468324 |
| 187 | 468641 | 188 | 468736 | 189 | 468994 |

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|-----|----------|-----|----------|-----|----------|
| 190 | 469056 | 191 | 469059 | 192 | 469078 |
| 193 | 469103 | 194 | 469106 | 195 | 469107 |
| 196 | 469108 | 197 | 469109 | 198 | 469355 |
| 199 | 469496 | 200 | 469517 | 201 | 469612 |
| 202 | 469623 | 203 | 469624 | 204 | 469626 |
| 205 | 470051 | 206 | 470052 | 207 | 470053 |
| 208 | 470054 | 209 | 470236 | 210 | 470447 |
| 211 | 470448 | 212 | 470476 | 213 | 470570 |
| 214 | 470571 | 215 | 471024 | 216 | 471191 |
| 217 | 471238 | 218 | 471239 | 219 | 471240 |
| 220 | 472066 | 221 | 472399 | 222 | 472462 |
| 223 | 472980 | 224 | 473213 | 225 | 473224 |
| 226 | 473484 | 227 | 473927 | 228 | 473996 |
| 229 | 473997 | 230 | 473998 | 231 | 473999 |
| 232 | 474119 | 233 | 474139 | 234 | 474145 |
| 235 | 474146 | 236 | 474147 | 237 | 474496 |
| 238 | 474674 | 239 | 474963 | 240 | 474964 |
| 241 | 475341 | 242 | 475342 | 243 | 477547 |
| 244 | 477564 | 245 | 477570 | 246 | 477660 |
| 247 | 477711 | 248 | 477712 | 249 | 477805 |
| 250 | 477955 | 251 | 478044 | 252 | 478107 |
| 253 | 478544 | 254 | 478633 | 255 | 478767 |
| 256 | 478794 | 257 | 478858 | 258 | 478864 |
| 259 | 478908 | 260 | 479042 | 261 | 479215 |
| 262 | 479216 | 263 | 479217 | 264 | 479374 |
| 265 | 479375 | 266 | 479414 | 267 | 479523 |
| 268 | 479524 | 269 | 479667 | 270 | 480059 |
| 271 | 480060 | 272 | 480383 | 273 | 480392 |
| 274 | 480740 | 275 | 481074 | 276 | 482573 |
| 277 | 482574 | 278 | 482857 | 279 | 483054 |
| 280 | 483169 | 281 | 483174 | 282 | 483269 |
| 283 | 483980 | 284 | 484275 | 285 | 484276 |

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| # | Ser. No. | # | Ser. No. | # | Ser. No. |
|-----|----------|-----|----------|-----|----------|
| 286 | 484858 | 287 | 484865 | 288 | 485282 |
| 289 | 485283 | 290 | 485507 | 291 | 485775 |
| 292 | 486258 | 293 | 486259 | 294 | 486265 |
| 295 | 486266 | 296 | 486297 | 297 | 487155 |
| 298 | 487397 | 299 | 487408 | 300 | 487410 |
| 301 | 487411 | 302 | 487428 | 303 | 487506 |
| 304 | 487516 | 305 | 487526 | 306 | 487536 |
| 307 | 487546 | 308 | 487556 | 309 | 487565 |
| 310 | 487649 | 311 | 487851 | 312 | 487895 |
| 313 | 487980 | 314 | 487981 | 315 | 487982 |
| 316 | 487984 | 317 | 488032 | 318 | 488058 |
| 319 | 488378 | 320 | 488383 | 321 | 488436 |
| 322 | 488438 | 323 | 488439 | 324 | 488619 |
| 325 | 488620 | 326 | 498002 | 327 | ***** |
| 328 | 485773 | | | | |

The subject matter claimed in the instant application is fully disclosed in the referenced copending applications and would be covered by any patent granted on that copending applications since the referenced copending applications and the instant application are claiming common subject matter, as follows: a signal processing apparatus and method including an interactive communications system apparatus and method.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending applications. *In re*

Schneller, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

A review of the claims in the related copending applications was made. These claims do not appear independent and distinct from the claims in this application. It is believed that CCPA in *Schneller* used the "independent and distinct" standard as the main factor in its determination that the double patenting rejection should be affirmed. The relevant arguments in the preceding paragraphs in support of this position are incorporated herein.

13. The non-statutory double patenting rejection, whether of the obvious-type or non-obvious-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent.

In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornam*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78 (d).

Effective January 1, 1994, a registered attorney or agent of record may sign a Terminal Disclaimer. A Terminal Disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 2-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention.

The examiner must be able to determine the meets and bounds of the claims to perform an effective search and analysis over the art. The examiner is not certain that the meets and bounds of these claims can be determined because of the language in the disclosure and claims. For example, the disclosure teaches many transmitter and receiver stations, instruct signals, control signals, decoders, etc. (This is just a partial list of terms in

applicants' disclosure that apply to plural elements in that disclosure.) When these phrases are claimed, the examiner needs to know "which" element in the disclosure is performing the claimed step. For example, when a hypothetical claim recites "transmitter station", and the disclosure teaches different ones (those in the origination, intermediate, and subscriber stations), the examiner needs to be able to envision what applicants could be claiming.

Applicants' assigned multiple meanings to words in a claim makes a claim indefinite.

Traditionally, examiners "diagram" claims to determine the meets and bounds. To explain what "diagraming" means, the examiner attempts to draw a picture (generally a circuit or a connection of block elements in an electrical application) which represents what was claimed so that the examiner can visualize how a mythical reference could anticipate the claim, if the claim was given its broadest reading. If the claim recites terms or phrases that have multiple meanings in the disclosure, the examiner can't determine whether the diagram of the claim is correct. Given this, how can the examiner determine whether or

not the scope of the art searched for is commiserate with the broadest reading of the claim?

Admittedly, the size of applicants' disclosure with its numerous possible implementations is contributing to the problem, but the problem does exist. Applicants are being requested to reference the claim limitations in this application to the disclosure so that the meets and bounds of these claims can be properly considered. This can be done in a remarks section, the claims do not have to be amended.

15. Claims 17 and 35 are objected to because of the following informalities: claim 17, line 2 is grammatically unclear; and claim 35, line 12, "an" should read --a--. Appropriate correction is required.

16. Claims 2-5, 11-18 and 23-30 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5, line 1, it is not understood how a programming storage device can be played.

There are instances when a limitation is claimed either in the preamble or the body of the claim, and then, again later in the claims, without being prefaced by "the" or "said".

Applicants should confirm whether the same limitation is being claimed the second time:

claim 2, line 12, "receiver specific datum";

claim 11, lines 13, 14 and 20, "instruct signal", "transmitter" and "control signals", respectively;

claim 14, lines 8 and 14, "receiver station" and "control signals" respectively;

claim 23, lines 12 and 15, "control signals" and "transmitter", respectively;

claim 26, lines 2 and 7, "transmitter" and line 2, "receiver";

claim 27, line 2, "transmitter"; and

claim 28, lines 3 and 7, "receiver station".

Claim Rejections - 35 U.S.C. § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States

before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

18. Claims 2-8, 10-16, 18-24, 26-28, 30-33 and 38-41 are rejected under 35 U.S.C. § 102(e) as being anticipated by Campbell et al. (Campbell).

As best understood, independent claim 2 reads on Campbell as follows. The claimed receiver station reads on the ADDRESSABLE CONVERTER 40 shown in FIGs 6-8 and 10; the claimed computer reads on the CONVERTER CONTROL LOGIC UNIT shown in FIGs 6 and 7; the claimed output device reads on CHANNEL 3/4 MODULATOR 134; the claimed program, the receiver specific datum and the control signals are shown at FIG 11 (see also column 12, line 58 to column 14, line 66); Campbell plainly teaches selecting a television program; and the steps of generating a receiver specific datum reads on the access restriction feature taught from column 11, line 64 to column 12, line 68 since such access restriction feature would have to be receiver specific as chosen by individual subscribers (see also column 13, lines 15-40).

Other claimed steps are inherently carried out by the apparatus as read on Campbell above.

The remote station of claim 3 reads on the head end station 11 shown in FIG 2 of Campbell.

With respect to claim 4, the second receiver specific datum reads on the different words recited from column 13, line 15 to column 14, line 50.

With respect to claim 5, the claimed programming storage device reads on the PCS 50 shown in FIGs 2 and 3; and the instruct signals is shown in FIG 11.

Independent claim 6 reads on Campbell as follows. The claimed remote intermediate mass medium program transmitter station reads on the head end station 11 shown in FIG 2; the claimed remote receiver station reads on the ADDRESSABLE CONVERTER 40 shown in FIGs 6 and 10; the claimed transmitter reads on the HEAD END SIGNAL COMBINER 20 shown in FIG 2 (see also column 4, lines 43-45); and the claimed instruct signals, control signals and information transmission are shown in FIG 11 (see also column 12, line 58 to column 14, line 66). The claimed steps are inherently carried out by the apparatus as read on Campbell above.

With respect to claim 7, Campbell teaches a text system (column 17, lines 21-41).

With respect to claim 8, Campbell plainly teaches a television program.

The scheduled time of transmitting recited in claim 10 reads on a pay-per-view of a scheduled event which is taught at column 12, lines 26-34.

As best understood, independent claim 11 and claim 12 read on Campbell in the same manner as claim 6 with the following exceptions. The claimed computer or processor recited on line 4 reads on the CONVERTER CONTROL LOGIC UNIT 104 shown in FIGs 6 and 7; the claimed selective transmission devices reads on the processing units 47 or 56 or the FSK DATA MODEM 58 (see column 5, lines 42-51); the claimed data receiver reads on the HVP 52 shown in FIGs 2, 4 and 5; the claimed control signal detector reads on the CENTRAL DATA CONTROL SYSTEM 12 shown in FIG 1; and the claimed controller or computer recited on line 7 reads on the PCS 50. The claimed steps are inherently carried out by the apparatus as read on Campbell above.

The scheduled time of transmitting recited in claim 13 reads on a pay-per-view feature of a scheduled event which is plainly disclosed in Campbell (see column 12, lines 26-34).

As best understood, independent claim 14 reads on Campbell in the same manner as independent claim 2 with the following exceptions. The claimed program receiver reads on the TUNER 106 and the IF AMP/DETECTOR 112 shown in FIG 6; the claimed signal detector reads also on the IF AMP/DETECTOR 112 (see column 8, line 46 to column 9, line 62); the claimed at least one computer or processor reads on the CONVERTER CONTROL LOGIC UNIT 104; the claimed transmitter station reads on the head end station 11 shown in FIG 2; the claimed transmitter reads on the HEAD END SIGNAL COMBINER 20; and the claimed steps plainly read on the subscriber response/opinion polling feature taught from column 17, line 65 to column 18, line 29. Other claimed steps are inherently carried out by the apparatus as read on Campbell above.

In claim 15, the non-visible portion of a television signal reads on the vertical blanking interval plainly recited throughout the disclosure of Campbell.

The output of a viewer order for a designated product or service recited in claim 16 reads on the pay-per-view feature or stock quotes (see column 5, lines 5-9 and column 12, lines 26-34).

With respect to claim 18, Campbell teaches a text system (column 17, lines 21-41).

Independent claim 19 and claim 20 read on Campbell as follows. The claimed receiver station reads on the ADDRESSABLE CONVERTER 40 shown in FIGS 6 and 10; and the claimed ancillary processor reads on the CONTROL COMPUTER 60 shown in FIG 3 where the supplemental program material is stored at the CARTRIDGE TAPE DATA STORAGE 68 or the FLOPPY DISK SUB-SYSTEM 70. The claimed steps are inherently carried out by the apparatus as read on Campbell above.

The overlaying feature recited in claims 20-22 reads on the teletext feature taught at column 17, lines 21-41.

As best understood, independent claim 23 reads on Campbell in the same manner as independent claim 14.

In claim 24, the non-visible portion of a television signal reads on the vertical blanking interval plainly recited throughout the disclosure of Campbell.

The switch of claims 26 and 27 reads on the VIDEO SWITCHES 98 shown in FIG 5 and the controller of claim 27 reads on the CONTROL COMPUTER 60 shown in FIG 3.

The scheduled time of transmitting a specific title or subject matter recited in claims 27 and 28 reads on a pay-per-view feature of a scheduled even which is plainly disclosed in Campbell (see column 12, lines 26-34).

The location of a signal in an information transmission recited in claim 30 is taught from column 12, line 58 to column 14, line 66.

Independent claim 31 reads on Campbell as follows. The claimed interactive mass medium output apparatus reads on the system shown in FIG 10; the claimed input device reads on the USER KEYBOARD 146 shown in FIG 6; the claimed steps are taught from column 17, line 65 to column 18, line 29; the claimed output device reads on the USER TV 46 shown in FIG 10; the claimed processor reads on the CONVERTER CONTROL LOGIC UNIT 104 shown in FIGs 6 and 7; the claimed receiver station reads on the ADDRESSABLE CONVERTER 40 shown in FIG 10; and the claimed controllable device reads on the TUNER 106 shown in FIG 6. The

claimed steps are inherently carried out by the apparatus as read on Campbell above.

In claim 32, the non-visible portion of a television signal reads on the vertical blanking interval plainly recited throughout the disclosure of Campbell.

Regarding claim 33, the claimed remote data collection station reads on the head end station 11 shown in FIG 2 and Campbell clearly teaches identifying one of a use of programming.

Independent claim 38 reads on Campbell as follows. The claimed receiver station reads on the ADDRESSABLE CONVERTER 40 shown in FIGs 6 and 10; the claimed processor reads on the MICROPROCESSOR UNIT 410 shown in FIG 7; and the claimed steps read on the access restriction feature taught at column 12, lines 27-57.

The claimed buffer of recited in claim 39 reads on the TIMER/DECODER 414 shown in FIG 7.

The claimed tuner in one of the controlling steps recited in claims 40 and 41 reads on the TUNER 106 shown in FIG 6.

19. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

20. Claims 9, 17, 29 and 34-37 are rejected under 35 U.S.C. § 103 as being unpatentable over Campbell et al. (Campbell) in view of Hedger.

Campbell differs from claims 9, 17, 29 and 34-37 in that Campbell does not teach the feature of transmitting executable code (read as software) to a receiver station computer. However, Hedger clearly teaches a teletext system that transmits executable code to a receiver station. Therefore, it would have been clearly obvious even to one of ordinary skill in the art at the time of the invention to modify the system and method of Campbell to transmit executable code as taught by Hedger in order to instantly make available to the user of the ultimate receiver station whatever software needed without requiring the user to go out and purchase and then update an individually packaged software.

21. Claim 25 is rejected under 35 U.S.C. § 103 as being unpatentable over Campbell et al. (Campbell) in view of Gimple et al. (Gimple).

Campbell as applied to claim 23 differs from claim 25 in not specifically teaching asynchronous transmission between a head end facility and the subscriber units. However, Gimple plainly teaches asynchronous transmission in an interactive two-way cable communication system (refer to the MODEM 18 and the UART 24 in

FIG 2A which depicts a subscriber unit which is read as the claimed receiver stations). Therefore, it would have been obvious even to one of ordinary skill in the art at the time of the invention to utilize asynchronous transmission in the system of Campbell. Since Gimple shows that asynchronous transmission can be used in an interactive two-way cable communication system, to choose asynchronous transmission over synchronous transmission really would have been a matter of design choice based upon such factors as cost since asynchronous transmission is less expensive.

22. A series of interviews were held before prosecution began on this application. Unless identified specifically below in this part of the action, these interviews did not address the merits of any single application, but rather issues that are appropriate to all of the related "Harvey" applications.

The first interview was held on August 13, 1995. It was a personal interview. Attending were one of the applicants, Mr. Harvey, and his attorneys, Messrs. Scott and Woolston. Representing the PTO were Messrs. Godici, Yusko, Orsino, and Groody. Mr. Harvey and his attorneys were informed that because

of the large number of related applications, the examination would be performed by a team of examiners. As of the August 1995 interview there existed a problem with some of the applications being charged large entity fees when applicants believed that small entity status was deserved. The PTO has referred this matter to the Office of Assistant Commissioner of Patents, specifically Hiram Bernstein, a petitions attorney. Mr. Harvey's representatives will attempt to resolve this issue through Mr. Bernstein. At this time all of the related cases had not been received in the Group. No examination was planned until at least late October because the team members were managers, and needed to complete other end of fiscal year assignments and all employee performance ratings. The PTO requested that any amendments to the specification, other than to correct continuing status, be delayed. Mr. Harvey's representatives stated that no other amendments to the specification were actually planned. The PTO's goal will be to attempt to reduce the amount of paper passed between applicant and PTO since the cases are related and very difficult to move from cite to cite because of their size. Copies of the prior art only need to be filed once. The PTO will only send newly cited art once. Preliminary amendments are being

prepared. The PTO however cautioned that the prosecution of the applications will not be delayed until applicants have filed these amendments. The PTO requested a chart establishing any relationships between cases and what parts of applicants' disclosure related blocks of cases were directed to. It was not, at this time, determined whether this chart would become part of the official file. The PTO planned to research this. It was the PTO's intent to examine related cases simultaneously. The PTO welcomed any claim amendments to include resubmissions of all claims, whether amended or not. Mr. Harvey's representatives were informed that the issue of double patenting was expected to be a major issue.

On November 2, 1995, a telephonic interview was held between Mr. Woolston and Mr. Groody. Mr. Woolston indicated that two prior art statements were being completed, one for cases with a 1987 effective date, the other for cases with a 1981 effective date.

On November 30, 1995, a personal interview was held. Representing applicants were Messrs. Scott, Woolston, and Grabarek. Representing the PTO were Messrs. Yusko, Orsino, and Groody. The content of a simultaneously filed prior art

statement was discussed. The PTO's copies of the parent files are missing the non-U.S. patents cited therein. The PTO requested copies of those prior art documents. Applicants gave the PTO a document showing which cases have already been amended. Since this document merely shows the status of any amended application, it has not been made part of the file record since that paper has no bearing on the merits of any issue before the PTO.

A second interview was held on later on November 30, 1995 between Mr. Scott and Mr. Groody. The sole topic discussed was double patenting. The discussion led to no conclusions on whether a double patenting rejections would be made in these applications.

An interview was held on December 6, 1995 between Mr. Scott and Mr. Groody. The discussion was directed to *In re Schneller*, 158 USPQ 210 (CCPA) and whether that decision will necessitate a double patenting rejection in any of these cases. Mr. Scott was asked whether a terminal disclaimer could be filed in all of the 327 related cases to obviate a possible double patenting rejection in each of these cases over each other. Mr. Scott agreed to consider this.

An interview was held on December 13, 1995 between Mr. Scott and Mr. Groody regarding the terminal disclaimer question above. Mr. Scott proposed filing a terminal disclaimer in about 250 of the 327 cases over each other if the PTO would have each of the about 250 issue within 4 or 6 months of each other. Mr. Groody felt that the PTO would be unwilling to suspend prosecution in some cases just to have other related cases issue close to each other. No agreement was reached.

Two interviews were held between Mr. Scott and Mr. Groody on April 2, 1996. Mr. Scott pointed out that, in parent file 5,233,654, there had been a restriction requirement. After reviewing the file, Mr Groody indicated that there would not be a Schneller double patenting rejection made in any case based on parent patent 5,233,654 and 5,335,277. The action recently sent out in 08/113,329 would be changed to reflect this point. Mr. Scott inquired whether a terminal disclaimer, in these applications, would have to be filed for all of the four Harvey patents (4,694,490; 4,704,725; 4,965,825; 5,109,414). Mr. Groody felt that all four should be disclaimed, if applicants elect to take that approach toward overcoming the double patenting rejections, because of the requirement in terminal disclaimers

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concerning common ownership. Mr. Scott indicated that in parent patent 4,965,825, there had been a multiplicity rejection. Mr. Groody will order the file, but felt that rejection would not overcome the Schneller double patenting rejections since the CCPA did not list this situation as an acceptable reason to file continuing cases. The Court limited its exception to "independent and distinct" claims. Mr. Groody acknowledged that the Board of Appeals may accept the multiplicity argument, but, in the absence of case law on this issue, he would still apply the Schneller rejections.

On June 10, 1996, Mr. Scott spoke with Mr. Groody on several topics. Related case 08/397,582 has been withdrawn from issue in Group 2200, and a new action will be mailed containing a double patenting rejection under *In re Schneller*. This application will now be examiner in Group 2600. Mr. Scott questioned whether applicants can withdraw the terminal disclaimer made in 397,582. Mr. Groody was unsure of the answer, but later checked with Mr. Orsino, who informed him that MPEP 1490 controlled.

Mr. Groody still believes that 08/113,329 can be expedited at the Board. Mr. Scott can refer to the appeal brief to be

filed in that case in responding to any application having a *Schneller* double patenting rejection.

A telephone interview was held on June 12, 1996 between Mr. Thomas Woolston and Marc E. Bookbinder representing the PTO. For S.N. 08/448,116, Mr. Woolston indicated that the supplemental preliminary amendment of Nov. 13, 1995 was incomplete and that a complete version of such would be filed shortly to perfect the submission as originally intended. Mr. Woolston also indicated that he intended to file a second supplemental preliminary amendment in this case bringing the total number of claims to 37.

Mr. Bookbinder indicated that the Group would like to have a complete grouping of applications in a manner that was submitted earlier for only a portion of the total filings. Mr. Woolston stated that such a grouping was available and that he would forward it to the Group as soon as possible.

Mr. Bookbinder requested that each future amendment filed be accompanied by an electronically readable version thereof. Mr. Woolston stated that he could provide a disk to include one or more amendments made to applications as they were filed.

Mr. Woolston stated that he has reviewed actions that have been mailed and that he takes issue particularly with the double

patenting rejections and the way In re Schneller has been applied. Mr. Bookbinder suggested that Mr. Woolston contact Mr. Groody of Group 2600 to discuss the particulars of the double patenting rejections since he was the author of those rejections.

On November 25, 1996, a telephone interview was held between Mr. Scott and Mr. Groody. Mr. Groody informed Mr. Scott that expedited processing at the Board for 113/329 would be arranged by the Office. No action on applicants' part was necessary. Applicants no longer had to submit a listing of related cases, since the examiners did not need that. Finally, application serial number 08/397,582, which has been withdrawn from issue, will be examined over all of the art cited in all of the later filed Harvey cases.

23. The art cited in the information disclosure statements submitted by applicants has been considered. The examiner initialed 1449 forms will be sent in a later action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Faile whose telephone number is (703) 305-4380.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Andrew Faile
ANDREW FAILE
PRIMARY EXAMINER
GROUP 2600